
Behavioral Placebos

Overview

- Definition and background
- Effects of placebos
- Behavioral placebos
- Conclusions

Placebo Quiz

- 1. Usually 33% of patients will respond to placebo
- 2. Placebo effects are short-lived
- 3. Placebo effects play more of a role in behavioral studies than in drug studies
- 4. Placebo responders=subgroup
- 5. Placebo effects are influenced by past treatment

Definition and Background

Definition

- “A placebo is an intervention designed to simulate a behavioral intervention but not believed (by the investigator) to be a specific therapy for the target condition”
 - » Turner, J., Deyo, R., Loeser, J. Von Korff, M., & Fordyce, W. JAMA, 1994, 1609-1614.

Placebo Simulates Intervention

- Non-specific effects
- Therapist attention, interest, and concern
- Patient and therapist expectations
- Reputation, expensiveness, and impressiveness of treatment
- Characteristics of setting

Definition: Key Points

- Simulates intervention
- Placebo is not believed to be specific for target condition

Effects of Placebos





The Powerful Placebo

- Beecher (1955)
- 15 studies of pain, $N > 1,000$
- “Placebos have a high degree of therapeutic effectiveness...being produced in $35.2 \pm 2.2\%$ of patients”

Medical Placebo Effects

- Sham medical treatments are effective—e.g. sham toothgrinding reduces TMD pain in 64% of patients
- Treatments initially considered effective but later shown no better than placebo show high rate of success
- Medical placebos produce side effects and carryover effects that mimic medication

Surgical Placebo

- 1950s: Two double-blind randomized trials of internal mammary artery ligation vs skin incision (placebo) for angina pectoris
- Both studies showed substantial and sustained improvements after skin incision alone

Placebo Meta Analysis

- Hrobjartsson & Gotzsche (2001)
- 32 binary outcome trials, 82 continuous outcome trials
- Placebo had no effect on binary outcomes
- Placebo had modest effect in small trials
- Placebo significant effect in pain trials (6.5 mm on 100 mm VAS)

Behavioral Placebos

Behavioral Placebo Example

- Blanchard et al. (1992) combined:
- Pseudomeditation=mental scan of muscles (but don't relax muscles) plus imagery of daily activities
- Alpha EEG suppression=auditory feedback of alpha EEG plus verbal encouragement

Key Findings

- Credibility high (mean=7.9 vs mean=8.5 for treatment group)
- High level of practice (mean=7.7 practices per week vs mean=6.9 tx)
- Performance=placebo showed “average” (9.1%) decreases in level of EEG over sessions
- Success rated by patient=6.5 on 9 point scale

Outcome

- CBT as effective as placebo: Why?
- Patients reported using the pseudomeditation to relax and calm themselves, despite being told not to relax

Supporting Findings

- Placebo group:
- Finger temp. increased within and across sessions
- Showed significantly higher reported use of “mental imagery”
- Placebo treatment was not neutral

Discussion

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